

CLAIM AMENDMENTS

1. (Currently Amended) A tissue treatment system, comprising:

an ablation probe having an ablative element and a perfusion control valve forming at least one perfusion exit port, the ablative element and perfusion control valve associated with a distal end of the ablation probe, wherein the perfusion control valve changes the size of the at least one perfusion exit port based on a sensed tissue parameter;

a source of ablation energy operably coupled to the ablative element; and

a pump assembly operably coupled to the at least one perfusion exit port; and

~~a feedback device configured for controlling the amount of infusaid displaced by the pump assembly based on a sensed tissue parameter.~~

2-3. (Cancelled).

4. (Original) The tissue treatment system of claim 1, wherein the ablation probe is rigid.

5. (Original) The tissue treatment system of claim 1, wherein the ablative element comprises at least one electrode.

6. (Original) The tissue treatment system of claim 5, wherein the at least one electrode is a single needle electrode.

7. (Original) The tissue treatment system of claim 5, wherein the at least one electrode comprises a needle electrode array.

8. (Original) The tissue treatment system of claim 1, wherein the source of ablation energy is a radio frequency generator.

9. (Original) The tissue treatment system of claim 1, wherein the pump assembly is external to the ablation probe.
10. (Original) The tissue treatment system of claim 1, wherein the pump assembly is carried by the ablation probe.
11. (Original) The tissue treatment system of claim 1, further comprising a source of infusaid, wherein the pump assembly is configured for pumping the infusaid from the infusaid source out through the at least one perfusion exit port.
12. (Original) The tissue treatment system of claim 1, wherein the tissue parameter is temperature.
13. (Original) The tissue treatment system of claim 1, wherein the tissue parameter is impedance.
14. (Cancelled).
15. (Currently Amended) A method of treating tissue, comprising:
ablating the tissue;
sensing a parameter of the tissue; and
perfusing the tissue with an infusaid through at least one perfusion port; and
changing the size of the at least one perfusion port based on the sensed tissue
parameter to control the amount of infusaid perfused through the at least one perfusion
port.
16. (Original) The method of claim 15, wherein the tissue is ablated using radio frequency energy.

17. (Original) The method of claim 15, wherein the tissue is perfused with the infusaid during the tissue ablation.
18. (Original) The method of claim 15, wherein the tissue parameter is temperature.
19. (Currently Amended) The method of claim 17 18, wherein the tissue perfusion is commenced when the sensed temperature surpasses a first temperature threshold.
20. (Original) The method of claim 19, wherein the tissue perfusion is ceased when the sensed temperature drops below a second temperature threshold.
21. (Original) The method of claim 15, wherein the tissue parameter is impedance.
22. (Original) The method of claim 21, wherein the tissue perfusion is commenced when the sensed impedance surpasses a first impedance threshold.
23. (Original) The method of claim 21, wherein the tissue perfusion is ceased when the sensed impedance drops below a second impedance threshold.
- 24-93. (Cancelled).
94. (New) The tissue treatment system of claim 1, wherein the perfusion control valve comprises a reed valve having at least one reed.
95. (New) The tissue treatment system of claim 94, wherein each of the at least one reed comprises a bi-metallic flange that bends in the presence of a temperature change.
96. (New) The tissue treatment system of claim 94, wherein each of the least one reed comprises a nitinol flange that bends in the presence of a temperature change.
97. (New) The tissue treatment system of claim 94, wherein the at least one reed comprises four reeds.

98. (New) The tissue treatment system of claim 94, wherein the at least one reed comprises a pair of opposing reeds.

99. (New) An ablation probe, comprising:
an elongate shaft having a distal end;
an ablative element disposed on the distal end of the shaft;
a perfusion lumen longitudinally extending within the shaft; and
a perfusion control valve associated with the distal end of the shaft, the perfusion control valve having perfusion exit port, the size of which changes based on a sensed tissue parameter.

100. (New) The ablation probe of claim 99, wherein the perfusion control valve comprises a reed valve having at least one reed.

101. (New) The ablation probe of claim 100, wherein each of the at least one reed comprises a bi-metallic flange that bends in the presence of a temperature change.

102. (New) The ablation probe of claim 100, wherein each of the least one reed comprises a nitinol flange that bends in the presence of a temperature change.

103. (New) The ablation probe of claim 100, wherein the at least one reed comprises four reeds.

104. (New) The ablation probe of claim 100, wherein the at least one reed comprises a pair of opposing reeds.

105. (New) The ablation probe of claim 99, wherein the shaft is rigid.

106. (New) The ablation probe of claim 99, wherein the ablative element comprises at least one electrode.

107. (New) The ablation probe of claim 106, wherein the at least one electrode is a single needle electrode.
108. (New) The ablation probe of claim 99, wherein the at least one electrode comprises a needle electrode array.
108. (New) The ablation probe of claim 99, wherein the perfusion control valve forms at least a portion of the ablative element.
109. (New) The ablation probe of claim 99, further comprising a pump assembly configured for pumping infusaid through the perfusion lumen.
110. (New) The ablation probe of claim 109, wherein the pump assembly is carried by a proximal end of the shaft.
111. (New) The ablation probe of claim 99, wherein the tissue parameter is temperature.
112. (New) The ablation probe of claim 99, wherein the tissue parameter is impedance.